

# Our Community

## Educational Opportunities

### Overview

As one of the nation's premier national laboratories, Los Alamos National Laboratory feels a special obligation to provide enhanced educational opportunities for the students of northern New Mexico.

### Math and Science Academy

Supported by the Laboratory, the Northern New Mexico Council for Excellence in Education developed the Math and Science Academy to significantly improve math and science education as part of larger systematic change in education for students in northern New Mexico. The project is designed to provide middle school teachers and students an opportunity to work with exemplary science and math mentors and gain content knowledge, experience and expertise by working in collaboration with a cadre of other committed schools and teachers.

Three schools were selected: Chama Middle School, Mora Middle School, and Española Middle School East. In 2001-2002, the program expanded to

include all 7th grade teams at Española Middle School East, and one 8th grade team at Española Middle School West.

In school year 2002-2003, 24 teachers participated in the program, including three student teachers, and more than 750 students.

### Electro/Mechanical Training Program

Cosponsored by the Laboratory and UNM-Los Alamos, the electro/mechanical training program is a work-study program designed to reach out to young men and women from local communities to develop employable skills that will make them marketable in the local communities, northern New Mexico and statewide. It is also designed to create a



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*Sharing resources and providing opportunities to achieve our mutual goals.*

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pool of qualified individuals from which the Laboratory can draw for technical positions. Since the program's inception in 1996, the Laboratory has hired 23 of the 24 graduated students as technical employees. The current class of 11 students will graduate in May 2003 with many of the sponsoring groups already indicating a desire to convert students to permanent employee status.

### LANL Employee Scholarships

Over the last four years, Laboratory and contractor employees raised more than \$585,000 in pledges and contributions toward the Los Alamos Employees' Scholarship Fund. Those contributions have enabled:

- 4 Platinum scholarships of \$40,000 (\$10,000 for four years)
- 8 Gold scholarships of \$10,000 (\$2,500 for four years)
- 13 Hewlett Packard Silver one-year scholarships of \$2,000
- 6 Endowed Leadership one-year scholarships of \$1,000
- 124 Bronze one-year scholarships of \$1,000 for 155 northern New Mexico students

### Tribal Educational Outreach

The Laboratory has implemented a Pueblo Environmental Monitoring Certificate Program at Northern New Mexico Community College and the Accord Pueblo Environmental Program offices have selected one person from each of the four Pueblos to participate. The instructors are Laboratory technicians who volunteer their time. The two-year program is a cooperative effort of the University of California, the Laboratory, the Department of Energy and Northern New Mexico Community



Laboratory staff interact with area students in a variety of forums to encourage their interest in math and science.

College and provides a certificate in environmental monitoring through the college. The goal is eventually to open this programs to others throughout northern New Mexico.

The Laboratory sponsored the first Tribal Education and Employment Informational Workshop in 2003 for tribal communities and American Indian organizations. Thirty-five participants representing 18 schools, education and employment programs and other educational organizations attended the workshop, which provided information on Laboratory and contractor employment and education program opportunities. The workshop also enabled the Laboratory and contractors' representatives to better understand the local tribal needs related to employment and education.

A new San Ildefonso Pueblo after-school program offered hands-on science workshops in January and February. Students in K-12 participated in workshops on radiation, geometry, materials science and water concepts. Laboratory scientists volunteered their time to provide the workshops to about 15 students weekly.

### **Laboratory Education Equipment Gift Program**

During fiscal year 2002, the Laboratory Education Equipment Gift program donated more than \$2.1 million in excess Laboratory equipment to schools and other organizations. As of March in fiscal year 2003, donations already surpassed the \$2 million mark. The LEEG program locates excess equipment Lab-wide for donation to accredited colleges, universities, elementary and secondary schools, and nonprofit organizations around the country. Recipients of equipment must use it for technical and scientific or research activities. Donations have included computers and accessories to various

elementary schools in northern New Mexico, laser systems to the University of New Mexico and New Mexico Highlands University, machine tools to the New Mexico Institute of Mining and Technology and an electron microscope to Arizona State University.

### **Northern New Mexico Council for Excellence in Education**

With strong Los Alamos National Laboratory participation, the Northern New Mexico Council for Excellence in Education (NNMCEE) is a community-based group that acts as a catalyst for school improvement and as an advocate for education and work force development in northern New Mexico.

Members include the State Department of Education, the University of New Mexico, New Mexico Highlands University, New Mexico Tech., the University of New Mexico Los Alamos branch, Northern New Mexico Community College, Santa Fe Community College, Los Alamos Schools, Española Schools, Pojoaque Schools, Santa Fe Schools, the University of California and Los Alamos National Laboratory.

### ***Go Figure!***

This program is a mathematics challenge cosponsored by Los Alamos and Sandia national laboratories, and is funded by the Department of Energy. The program is dedicated to strengthening the mathematical capabilities of the nation's youth by identifying, recognizing and rewarding those students who are talented in mathematical thinking.

*Go Figure!* targets students from grades 7-12 in northern New Mexico; it provides an opportunity to participate in problem solving and enriching mathematical experiences for the average student who enjoys math to the very best student who excels in math.

Participants are offered 13 problems

and two-and-one-half hours of time in which to solve them. Problems selected require solutions with a minimal amount of knowledge and a great deal of creativity, originality and analytical thinking.

### **Robotics Competition**

Funded by the Department of Energy DP, this program is aimed at growing and recruiting the future Laboratory employees. Its primary objective is to create excitement and interest in science by exposing students to the basics of robotic technology, with the ultimate goal of recruiting students into scientific academic pursuits that will lead to future careers at Los Alamos National Laboratory.

It is structured as a four-day graded-level series of workshops and competitions, with more advanced students (grades 6-12) attending for three days and beginning students (ages 6-12) attending a basic one-day workshop. It is designed specifically to involve the youth of northern New Mexico and surrounding states in technology they can understand, that excites them, and that will interest them in math and science.

The tenth annual competition was held in Los Alamos May 1-4, 2003 for more than 140 students from New Mexico and neighboring states. Another robotics workshop will be held during the annual UNM-Los Alamos Children's Science Camp August 4-15, 2003.

Another robotics workshop was sponsored by the Northern New Mexico Systemic Initiative in Shiprock with more than 100 Native American students; 40 students from the Math & Science Academy recently participated in after-school robotics workshops.



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